Planning Statement for VPDES Permit Application Processing DEQ-SCRO

VPDES	OwnerName	Facility	County
VA0006513	Town of Gretna	Gretna WTP	Pittsylvania

Outfall #: 001

River Basin: Roanoke River **Receiving Stream:** Goerges Creek

Subbasin: Roanoke River

Watershed Code: L68R **River Mile:** 11.52

	MGD		MGD
1Q10	0	**HF 1Q10**	0.221
7Q10	0.057	**HF7Q10**	0.293
30Q5	0.215	**HF30Q10**	0.467
30Q10	0.143	**HM**	0

Modeling Notes

WQMP Name No Plan

Statement

TMDL ID None

Impairment Cause

TMDL Due Date

Completed TMDL Information

No allocation in the Banister River TMDL.

TMDL Approval Dates

Amanda B. Gray

Amanda B. Gray, Water Planning Engineer

10.27.08

Date

MEMORANDUM
Department of Environmental Quality
South Central Regional Office

7705 Timberlake Road **Lynchburg, Virginia 24502**

Subject: Planning and TMDL Service Requests for VPDES Permits

To: Amanda Gray, Water Planning Engineer to
Paula Nash, TMDL Coordinator

From: Kirk A. Batsel, Water Permits

Date: October 20, 2008

Copies: Planning File

The request for information is to be made at the following times:

Planning: Upon sending the reissuance reminder letter to the facility or, for an issuance or modification, at the time of application/modification request receipt.

TMDL: Same as above. For VPDES general permits, at the time of registration statement receipt.

FACILITY NAME: Town of Gretna WTP

VPDES PERMIT NO. VA0006513 EXPIRATION DATE: 10/03/09

FACILITY PHYSICAL LOCATION: End of Nalls Street, Gretna, Virginia 24557

INDIVIDUAL PERMIT ACTION: Issuance *Reissuance* Modification

GENERAL PERMIT ACTION: New Coverage Previously Covered

PERMIT TYPE: Major *Minor* General Municipal *Industrial* Storm Water TMP TRE

If a VPDES General Permit, which type: _____

PERMIT WRITERS: ATTACH THE FOLLOWING

- **Topo map with facility location and outfall locations clearly marked (include any proposed outfalls)**
- **Site diagram for facilities with multiple outfalls**
- **Description or map showing effluent flow path if not apparent on topo map**
- **The outfall numbers, latitude, longitude, receiving stream and topo name in the table below (use an additional sheet if there are more outfalls)**

Outfall No.	Latitude	Longitude	Receiving Stream	Topo Name
001	36°57'4"	-79°21'6"	Georges Creek	047A Gretna

DATE INFORMATION NEEDED: April 6, 2009

MEMORANDUM

DEPARTMENT OF ENVIRONMENTAL QUALITY
South Central Regional Office - Water Planning
7705 Timberlake Road Lynchburg, VA 24502 434/582-5120

SUBJECT: Flow Frequency Determination
Gretna WTP – VA#0006513

TO: Kirk Batsel

FROM: Amanda Gray

DATE: October 27, 2008

COPIES: File

This memo supersedes my memo dated February 11, 2004 regarding the subject permit. The Gretna WTP discharges to the George's Creek in Gretna, Va. Stream flow frequencies are required at this site for use by the permit writer in developing effluent limitations for the VPDES permit.

The VDEQ has operated a continuous record gage on the George's Creek near Gretna, Va (#02076500) since 1949. The gage is located 4.5 miles downstream from the discharge point. The flow frequencies for the gage and the discharge point are presented below. The values at the discharge point were determined by drainage area proportions and have been adjusted to include the withdrawals by the Town of Gretna WTP which lies between the gage and the Gretna WTP outfall. This analysis does not address any other withdrawals or any other discharges, or springs lying between the gage and the discharge point.

Georges Creek near Gretna, Va (#02076500)
Drainage Area = 9.24 mi^2

1Q10 = 1.6 cfs	HF 1Q10 = 3.4 cfs
7Q10 = 2.0 cfs	HF 7Q10 = 3.9 cfs
30Q5 = 3.1 cfs	HF 30Q10 = 5.1 cfs
30Q10 = 2.6 cfs	HM = 6.6 cfs

The high flow months are January through May. During the high flow period, the Town of Gretna's maximum withdrawal occurred during February 2000 and equaled 0.420 cfs. During the low flow period, the Town's maximum withdrawal occurred during August 2007 and equaled 0.36 cfs. The withdrawal volumes have been subtracted from their respective flow frequencies.

Georges Creek at Gretna WTP discharge point:

Drainage Area = 2.07 mi^2

1Q10 = 0.358 – 0.36 = 0.0 cfs (0.00 MGD)

7Q10 = 0.448 – 0.36 = .088 cfs (0.057 MGD)

30Q5 = 0.694 – 0.36 = 0.334 cfs (0.215 MGD)

30Q10 = 0.582 – 0.36 = 0.222 cfs (0.143 MGD)

High Flow 1Q10 = 0.762 – 0.42 = 0.342 cfs (0.221 MGD)

High Flow 7Q10 = 0.874 – 0.42 = 0.454 cfs (0.293 MGD)

High Flow 30Q10 = 1.143 – 0.42 = 0.723 cfs (0.467 MGD)

Harmonic Mean = 0.0 cfs (due to zero flow at 1Q10)

If you have any questions concerning this analysis, please let me know.